

REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested.

Status of the Claims

Claims 1 and 7-21 were rejected.

Claim 1 has been amended.

No new matter has been added.

Claims 1 and 7-21 are now pending.

Rejections Under 35 U.S.C. §103

Claims 1, 7-11, and 15-21 were rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,112,667 to Li et al. (“Li”) in view of U.S. Patent No. 3,956,447 to Denommee et al. (“Denommee”) and U.S. Patent No. 4,990,207 to Sasaki et al. (“Sasaki”).¹

Independent claim 1 has been amended to recite a method of producing a molded article of fiber-reinforced composite material including the steps of:

(3) forming a first desired three-dimensional shape by pressing the partially separated flaps of the respective prepgs with a second press die fitted to the first press die and the first press die; and

(4) forming a second desired three-dimensional shape as a hole by overlapping end edge parts of residual portions on the partially separated flaps at a predetermined part of a third press die that is a different press die from the first press die and pressing them with a fourth press die fitted to the third press die and the third press die.

It is respectfully submitted that the cited references, alone or in combination, do not teach or suggest at least these features recited in independent claim 1.

Li describes an impact resistant composite and helmet made from multiple prepreg layers. *See Li, Abstract.* The Examiner concedes that Li does not disclose a two-step pressing method, and attempts to cure this deficiency with Denommee. Applicants respectfully disagree.

¹ Although the Examiner did not list Sasaki as a reference relied upon in rejecting claims 1, 7-11, and 15-21 in the introductory paragraph summarizing the rejection of claims 1, 7-11, and 15-21 on page 2 of the Office Action, the Examiner had relied on Sasaki in discussing the rejection of claim 1 on page 5 of the Office Action.

Denommee describes a method of making deep drawn, laminated, non-metallic articles having high ballistic resistance. *See* Denommee, Abstract. After the preform has been prepared, the described method includes a finish molding step which includes a degassing procedure. *See* Denommee, col. 4, lines 24-67. The degassing procedure during the finish molding step is not a two-step molding procedure, but merely calls for reducing the pressure on the preform in the mold to atmospheric pressure, and subsequently reapplying the mold pressure. *See* Denommee, col. 4, lines 58-67. In one embodiment, the procedure is described as applying a molding force, “degassing by raising the female element of the mold, allowing substantially all trapped gases to escape from the preform, then reclosing the mold” and restoring the pressure. *See* Denommee, col. 4, lines 3-17.

In contrast, the presently claimed invention is directed to a method of producing a molded article of fiber-reinforced composite material including two distinct molding steps where each step employs different die presses. Denommee’s description of merely opening and closing the same mold in order to perform “degassing” is not comparable to the two distinct molding steps each employing different die presses of the presently claimed invention. As recited in claim 1 of the present application, the first molding step utilizes first and second die presses, and the second molding step utilizes third and fourth die presses, with the first and third die presses being different.

Further, Sasaki merely describes a process for preparing fiber reinforced thermoplastics, and does not cure the deficiencies of Li and Denommee. *See* Sasaki, Abstract.

Thus, for at least the reasons described above, a combination of Li, Denommee, and Sasaki, to the extent proper, does not render independent claim 1, or dependent claims 7-11, and 15-21 obvious. Withdrawal of the rejection of independent claim 1, and dependent claims 7-11, and 15-21, under 35 U.S.C. §103(a) based on Li, Denommee, and Sasaki is respectfully requested.

Claims 12 and 13 were rejected under 35 U.S.C. §103(a) as obvious over Li, Denommee, and Sasaki in view of U.S. Patent No. 3,547,764 to Amerongen (“Amerongen”).

Amerongen describes rubber articles reinforced with a fibrous polylactone. *See* Amerongen, Abstract.

Claims 12 and 13 depend from independent claim 1, and Amerongen does not cure the deficiencies of Li, Denommee, and Sasaki.

Thus, for at least the reasons described above, a combination of Li, Denommee, Sasaki, and Amerongen to the extent proper, does not render dependent claims 12 and 13 obvious. Withdrawal of the rejection of dependent claims 12 and 13 under 35 U.S.C. §103(a) based on Li, Denommee, Sasaki, and Amerongen is respectfully requested.

Claim 14 was rejected under 35 U.S.C. §103(a) as obvious over Li, Denommee, Sasaki, and Amerongen in view of U.S. Patent No. 5,879,608 to Lammeck et al. (“Lammeck”).

Lammeck describes a molded polyurethane article made by reacting polyisocyanates with polyol compositions. *See Lammeck, Abstract.*

Claim 14 depends from independent claim 1, and Lammeck does not cure the deficiencies of Li, Denommee, Sasaki, and Amerongen.

Thus, for at least the reasons described above, a combination of Li, Denommee, Sasaki, Amerongen, and Lammeck to the extent proper, does not render dependent claim 14 obvious. Withdrawal of the rejection of dependent claim 14 under 35 U.S.C. §103(a) based on Li, Denommee, Sasaki, Amerongen, and Lammeck is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue. If there are any other issues remaining, which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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